

## CLAIMS:

1. A mobile radio comprising a GSM receiving unit (1), an analog-to-digital converter (3) next in line for converting analog signals into digital signals, a digital signal processor (4) for reconstructing and processing the received signals, a system controller (5) for controlling the components of the mobile radio, a real-time circuit (7) comprising an oscillator (8) and a display (6) for displaying information, in which a further receiving unit (19, 22) is arranged for receiving a time reference signal, which further receiving unit (19, 22) comprises an antenna (13, 18) for receiving time reference signals, tunable capacitors (12) for tuning to the transmit frequency and an amplifier (11) for amplifying the received time reference signal, and a multiplex unit (2) inserted between the GSM receiving unit (1) and the analog-to-digital converter (3), which multiplex unit (2) can be supplied with the received analog mobile radio signal and the time reference signal and in which mobile radio the received time reference signal can be applied at a predetermined instant to the digital signal processor (4) for demodulation and filtering and to the system controller (5) for decoding, and there is provided to update the real-time circuit (7) with the decoded time reference signal.
2. A mobile radio as claimed in claim 1, characterized in that the multiplex unit (2) can be controlled by the system controller (5).
3. A mobile radio as claimed in claim 1, characterized in that the gain factor of the amplifier (11) and the tunable capacitance (12) can be set by the system controller (5).
4. A mobile radio as claimed in claim 1, characterized in that the real-time circuit (7) can be updated by the system controller (5).
5. A mobile radio as claimed in claim 1, characterized in that the updating distance can be chosen at will or is fixedly programmed.

6. A mobile radio as claimed in claim 1, characterized in that the further receiving unit is a receiving unit (22) for amplitude-modulated signals.
7. A mobile radio as claimed in claim 1, characterized in that the receiving unit is  
5 a receiving unit (19) for frequency-modulated signals.
8. A method for receiving a time reference signal and updating a real-time circuit (7) in a mobile radio, in which a GSM mobile radio signal is received by a GSM receiving unit (1) and a time reference signal is received by a further receiving unit (22, 19), in which  
10 the time reference signal after being amplified to a similar level to the mobile radio signal is applied to a multiplex unit (2) and is demodulated and filtered by a digital signal processor (4) of the mobile radio and decoded by a system controller (5) and the real-time circuit (7) is updated with the decoded time information.
9. A method as claimed in claim 8, in which the time reference signal is an  
15 amplitude-modulated signal.
10. A method as claimed in claim 8, in which the time reference signal is contained in a frequency-modulated RDS/RDBS signal.  
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11. A method as claimed in claim 10, in which the other information contained in the RDS/RDBS signal is decoded and shown on the display.